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- (71) Applicant (for all designated States except US): SASOL TECHNOLOGY (PROPRIETARY) LIMITED [ZA/ZA]; 1 Sturdee Avenue, Rosebank 2196 (ZA).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): KOPER, Edward, Ludovicus [NL/ZA]; 11 Douglas Street, Secunda 2302 (ZA). GREAGER, Ivan [ZA/ZA]; 86 Barcelona II Spica Road, Sundowner 2162 (ZA). SCHOLTZ, Jan, Hendrik [ZA/ZA]; 35 Selkirk, Parkview 2193 (ZA). DE WET, Johan, Pieter [ZA/ZA]; 65 Beethoven Street, Vanderbijlpark 1911 (ZA). DESMET, Mieke, Ann [ZA/ZA]; 4 Sandkiaat Avenue, Weltevredenpark 1709 (ZA). JANSEN, Wilhelmina [ZA/ZA]; 14 Deo Volente Mozart Street, Vanderbijlpark 1911 (ZA). JACOBSON, Paul [ZA/ZA]; 14 Sasurei Court, Toon van der Heever Street, Sasolburg 9570 (ZA).

- (74) Agents: DONALD, Heather, June et al.; Spoor & Fisher, PO Box 41312, Craighall 2024 (ZA).
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(54) Title: PRODUCTION OF LINEAR ALKYL BENZENE

(57) Abstract: This invention relates to a process for producing linear alkyl benzene and linear paraffins, the process including the steps of obtaining a hydrocarbon condensate containing olefins, paraffins and oxygenates from a low temperature Fischer-Tropsch reaction; a) fractionating a desired carbon number distribution from the hydrocarbon condensate to form a fractionated hydrocarbon condensate stream; b) extracting oxygenates from the fractionated hydrocarbon condensate stream from step a) to form a stream containing olefins and paraffins; c) alkylating the stream containing olefins and paraffins from step b) with benzene in the presence of a suitable alkylation catalyst; and d) recovering linear alkyl benzene and linear paraffin.



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A. CLASSIFICATION OF SUBJECT MATTER IPC 7 C07C7/10 C10G21/16 C07C2/70 According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) CO7C C10G IPC 7 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data, PAJ, CHEM ABS Data C. DOCUMENTS CONSIDERED TO BE RELEVANT Relevant to claim No. Citation of document, with indication, where appropriate, of the relevant passages Category * 1 - 24WO 02/31085 A (SASOL TECHNOLOGY PTY LTD; SCHOLTZ JACOB JOHANNES (ZA); WET JOHAN PETE) 18 April 2002 (2002-04-18) page 3, paragraph 3 - page 4, paragraph 4 claims 1-16 1 - 24DE 199 11 910 A (LINDE AG) 21 September 2000 (2000-09-21) column 1, line 1 - line 23 column 1, line 48 - line 59 column 3, line 8 - line 29 claim 1 1-13, US 4 686 317 A (QUANN RICHARD J ET AL) 21-24 11 August 1987 (1987-08-11) column 1, line 10 - line 17 table 2 -/--Patent family members are listed in annex. Further documents are listed in the continuation of box C. Special categories of cited documents: *T* later document published after the International filing date or priority date and not in conflict with the application but *A* document defining the general state of the art which is not cited to understand the principle or theory underlying the considered to be of particular relevance invention "E" earlier document but published on or after the international "X" document of particular relevance; the claimed invention filing date cannot be considered novel or cannot be considered to Involve an inventive step when the document is taken alone "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another "Y" document of particular relevance; the claimed invention citation or other special reason (as specified) cannot be considered to involve an inventive step when the document is combined with one or more other such docu-*O* document referring to an oral disclosure, use, exhibition or ments, such combination being obvious to a person skilled other means in the art. "P" document published prior to the International filing date but *&* document member of the same patent family later than the priority date claimed Date of mailing of the international search report Date of the actual completion of the international search 15/09/2004 2 September 2004 Authorized officer Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, O'Sullivan, P Fax: (+31-70) 340-3016

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